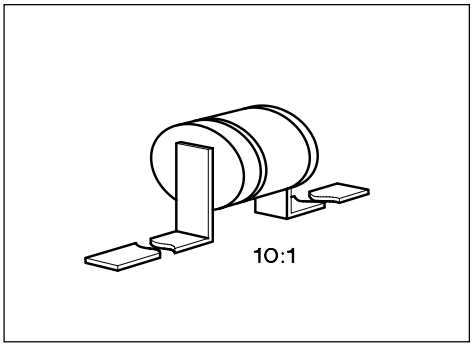
查询BAT14-4供应商

SIEMENS

Silicon Schottky Diodes

BAT 14- … 4

- Medium barrier diodes for detector and mixer applications
- Hermetical ceramic package
- For frequencies up to 40 GHz



ESD: Electro**s**tatic **d**ischarge sensitive device, observe handling precautions!

Type	Frequency band (GHz)	Ordering Code	Pin Configuration	Package[1)]
BAT 14-014 BAT 14-034	… 4 (S)	Q62702-D1005 Q62702-D1019	Cathode: black dot, heat sink 	T1
BAT 14-044 BAT 14-064	… 8 (C)	Q62702-D1026 Q62702-D1036		
BAT 14-074 BAT 14-094	… 12 (X)	Q62702-D1041 Q62702-D1051		
BAT 14-104 BAT 14-114	… 18 (Ku)	Q62702-D1056 Q62702-D1061		
BAT 14-124	… 40 (Ka)	Q62702-D1066		

Maximum Ratings

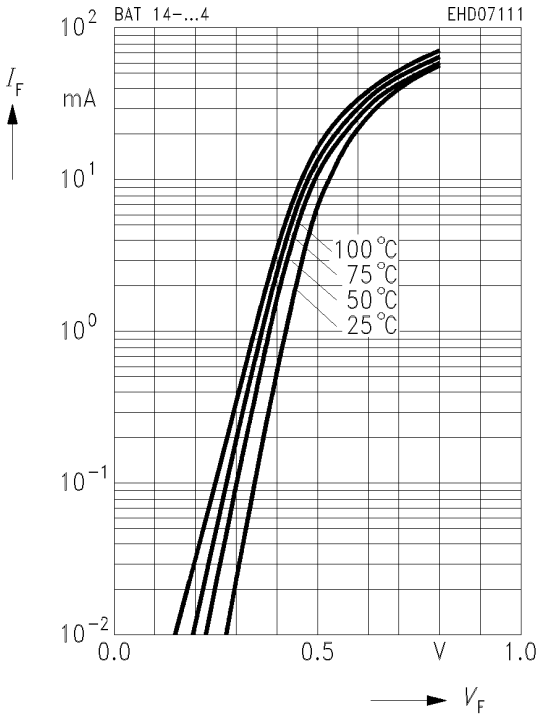
Parameter	Symbol	Values	Unit
Reverse voltage	V_R	3	V
Forward current BAT 14-014 … BAT 14-064 BAT 14-074 … BAT 74-124	I_F	100 50	mA
Junction temperature	T_j	175	°C
Storage temperature range	T_{stg}	– 65 … + 150	
Operating temperature range	T_{op}	– 65 … + 150	

1) For detailed information see chapter Package Outlines.

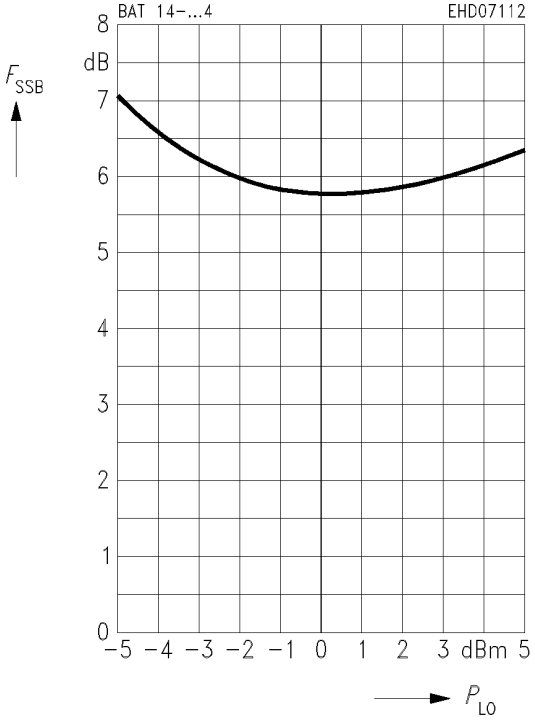
Electrical Characteristics
at T_A = 25 °C, unless otherwise specified.

Parameter		Symbol	Values			Unit
			min.	typ.	max.	
Breakdown voltage I_R = 10 µA		$V_{(BR)}$	3	–	–	V
Forward voltage		V_F				
I_F = 1 mA	BAT 14-014/-034		–	0.42	–	
	BAT 14-044/-064		–	0.43	–	
	BAT 14-074/-094		–	0.44	–	
	BAT 14-104/-114		–	0.46	–	
	BAT 14-124		–	0.47	–	
I_F = 10 mA	BAT 14-014/-034		–	0.5	–	
	BAT 14-044/-064		–	0.53	–	
	BAT 14-074/-094		–	0.55	–	
	BAT 14-104/-114		–	0.58	–	
	BAT 14-124		–	0.63	–	
Diode capacitance		C_T				pF
f= 1 MHz, V_R = 0	BAT 14-014/-034		–	0.25	0.35	
	BAT 14-044/-064		–	0.2	0.25	
	BAT 14-074/-094		–	0.17	0.2	
	BAT 14-104/-114		–	0.13	0.15	
	BAT 14-124		–	0.1	0.12	
Case capacitance		C_C	–	0.1	–	
Noise figure (single sideband)		F_{SSB}				dB
IF amplifier noise						
F_{IF} = 1.5 dB, P_{LO} = 3 dBm, f_{IF} = 10.7 MHZ						
f= 3 GHz	BAT 14-014		–	5.5	–	
	BAT 14-034		–	6.5	–	
f= 6 GHz	BAT 14-044		–	5.5	–	
	BAT 14-064		–	6.5	–	
f= 9.3 GHz	BAT 14-074		–	5.5	–	
	BAT 14-094		–	6.5	–	
f= 16 GHz	BAT 14-104		–	6.0	–	
	BAT 14-114		–	7.0	–	
	BAT 14-124		–	9.0	–	
Differential forward resistance		r_f				Ω
I_F = 10/50 mA	BAT 14-014		–	3	–	
	BAT 14-034		–	4	–	
	BAT 14-044		–	3.5	–	
	BAT 14-064		–	4.5	–	
	BAT 14-074		–	4.5	–	
	BAT 14-094		–	5.5	–	
	BAT 14-104		–	5.5	–	
	BAT 14-114		–	7	–	
	BAT 14-124		–	8	–	

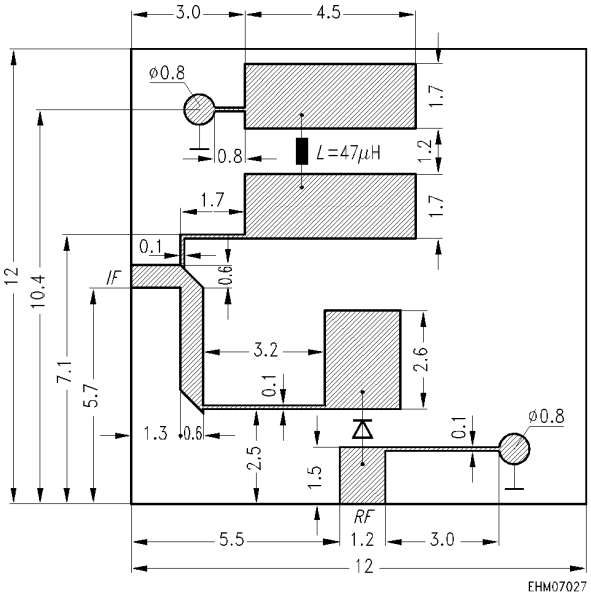
Forward current $I_F = f(V_F)$
of BAT 14-094



Single sideband noise $F_{SSB} = f(P_{LO})$
f_{LO} = 9.375 GHz, f_{IF} = 10.7 MHZ at
F_{IF} = 1.5 dB



Measuring circuit for IF amplifier noise



Ceramic p. c. board for noise measurement
at 9.375 GHz (material = alumina; E_R = 9.94; thickness = 0.635 mm)

Dimensions in mm